AMENDMENTS TO THE CLAIMS

1. (Withdrawn) A method of manufacturing a longitudinal granular oxide recording medium comprising obtaining a non-magnetic substrate, heating the substrate at a temperature T_1 that is greater than 150°C, forming a first layer with body-centered cubic atomic structure and with a ⟨200⟩ preferred growth orientation, cooling the substrate to a temperature T_2 and forming a second layer comprising a magnetic oxide-containing granular magnetic layer with a hexagonal close packed atomic structure and with a ⟨11-20⟩ preferred growth orientation.

2. (Withdrawn) The method of claim 1, wherein the forming a second layer comprises forming physically separated magnetic grains and an inter-granular region between grains and filling the inter-granular region with an oxide-containing material.

3. (Withdrawn) The method of claim 1, wherein the non-magnetic substrate has a textured surface and magnetic grains in the magnetic oxide containing granular magnetic layer are oriented along texture lines so that remanent magnetization measured along texture lines, Mr_1, is larger than remanent magnetization measured perpendicular to texture lines, Mr_2 ($Mr_1 > Mr_2$) resulting in media having OR-Mrt = Mr_1/ Mr_2 of greater than 1.

4. (Withdrawn) The method of claim 1, wherein the T_1 is greater than 200°C and the T_2 is below 200°C.

5. (Withdrawn) A method of claim 1, wherein the T_2 is below 160°C.

6. (Withdrawn) A method of claim 3, with magnetic oxide containing layer sputtered after cooling the substrate below 120°C.

7. (Withdrawn) The method of claim 1, wherein the forming a second layer is under a pressure P_2, wherein $P_2 > 10$mTorr.

8. (Withdrawn) The method of claim 7, wherein the first layer is formed under a pressure P_1, wherein $P_2 > P_1$.

9. (Withdrawn) The method of claim 1, wherein the magnetic oxide-containing granular magnetic layer comprises Co, one or more added elements selected from Cr, Pt, Ta, B, Fe, Cu, Ag, W, Mo, Ru, Si, Ge, Nb, Ni, and combinations thereof, and at least one oxide material selected from group consisting of Si, Al, Ti, Hf, Zr, Y, Cr, Co, Ni, Ta oxides and combinations thereof.

10. (Withdrawn) The method of claim 1, wherein the first layer with body-centered cubic atomic structure comprises Cr and one or more added elements selected from the group consisting of Ta, B, W, Mo, Ru, Si, Ge, Nb, Hf and combinations thereof.

11. (Withdrawn) The method of claim 1, further comprising forming at least one interlayer with hexagonal close packed atomic structure and with a ⟨11-20⟩ preferred growth orientation between the first layer and the magnetic oxide-containing granular magnetic layer.

12. (Original) A longitudinal granular oxide recording medium, comprising:

(a) at least one non-magnetic layer with body-centered cubic atomic structure with a ⟨200⟩ preferred growth orientation,

(b) at least one interlayer with hexagonal close packed atomic structure and with a ⟨11-20⟩ preferred growth orientation,

(c) at least one magnetic oxide-containing granular magnetic layer with hexagonal close packed atomic structure and with a ⟨11-20⟩ preferred growth orientation.

13. (Original) The longitudinal granular oxide recording medium of claim 12, wherein the interlayer comprises a Co-X alloy, wherein X is selected from the group consisting of Cr, Pt, Ta, B, W, Mo, Ru, Si, Cu, Ag, Ge, Nb, Fe, Ni, Au and combinations thereof.

14. (Original) The longitudinal granular oxide recording medium of claim 12, wherein the interlayer comprises at least two layers: a first interlayer, IL_1, located above first layer (a) and comprising a Co-X alloy, wherein X is selected from the group consisting of Cr, Pt, Ta, B, W, Mo, Ru, Si, Cu, Ag, Ge, Nb, Fe, Ni, Au and combinations thereof, and a second interlayer, IL_2, comprising a Ru-Y alloy, wherein Y is selected from the group consisting of Rh, Ir, Cr, Re, Co, V, W, Ta, Zr, Hf, Ti, Mo, Au and combinations thereof.

15. (Currently amended) The longitudinal granular oxide recording medium of claim [[12]] 14, wherein the first interlayer comprises at least 50 at. % of Co and the second interlayer comprises at least 50 at. % of Ru.

16. (Original) The longitudinal granular oxide recording medium of claim 12, wherein the magnetic oxide-containing granular magnetic layer comprises magnetic crystal grains that are substantially isolated by an inter-granular region comprising a non-magnetic substance.

17. (Original) The longitudinal granular oxide recording medium of claim 16, wherein there is substantially no diffusion of the non-magnetic substance from the magnetic crystal grains to the inter-granular region.

18. (Original) The longitudinal granular oxide recording medium of claim 12, further comprising a substrate having a textured surface and the magnetic oxide-containing granular magnetic layer has an OR-Mrt of greater than 1.0.

19. (Original) The longitudinal granular oxide recording medium of claim 12, wherein a full-width at half-maximum of a rocking curve of the magnetic oxide-containing granular magnetic layer in a [11-20] direction is less than 10°.

20. (Original) The longitudinal granular oxide recording medium of claim 12, wherein a full-width at half-maximum of a rocking curve of the magnetic oxide-containing granular magnetic layer in a [11-20] direction is less than 7° and the magnetic oxide-containing granular magnetic layer has an OR-Mrt of greater than 1.4.

21. (Withdrawn) The method of claim 1, wherein first layer with body-centered cubic atomic structure comprises at least two layers: a first underlayer, UL_1, located above a seed layer and comprising a Cr or CrX alloy, wherein X is selected from the group consisting of Ru, W, Mo, Si, Nb, V, Y, Zr, Nb and combinations thereof, and a second underlayer, UL_2, above the first underlayer comprising a CrMoY alloy, wherein Y is selected from the group consisting of Ru, W, Mo, Si, Nb, V, Y, Zr, Nb and combinations thereof.

22. (Withdrawn) The method of claim 1, wherein first layer with body-centered cubic atomic structure comprises at least three layers: a first underlayer, UL_1, located above seed layer and comprising a Cr or CrX alloy, wherein X is selected from the group consisting of Ru, W, Mo, Si, Nb, V, Y, Zr, Nb and combinations thereof, and a second underlayer, UL_2, above the first underlayer comprising a CrBY alloy, wherein Y is selected from the group consisting of

Ru, W, Mo, Si, Nb, V, Y, Zr, Nb and combinations thereof, and a third underlayer, UL_3, above the second underlayer comprising a CrMoZ alloy, wherein Z is selected from the group consisting of Ru, W, Mo, Si, Nb, V, Y, Zr, Nb and combinations thereof.